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ON

CLOTHING.

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ADVERTISEMENT.

It has been objected to the former edition of this pamhlet, that "the free and open discussion of some subjects elating to the animal economy, renders any purpose of puting it into the hands of children and the female sex improper." It is readily acknowleged, that a book of the reatest utility to an adult, may be prematurely put into ne hands of a child; and a very slight inspection into the lan of the publication, of which this forms one number, vill discover that a few subjects only are immediately inended for the use of children. In obviation of the tter part of the charge, the compiler cannot allow that nan is a being privileged to investigate the arcana of nature, o the exclusion of woman; especially where both sexes are nutually concerned and interested. There appears a degrading intention couched in such conduct. A lady might ot, indeed, chuse to receive a physical treatise from ne hands of a very distant acquaintance, from a fear of is deducing an unfavourable or dishonourable opinion f her character, but a well-informed woman would not esitate a moment to receive such a book from a parent, a uardian, or a friend, and it might furnish subjects for conersation, without any impression of indecorum, impropri:y, or indelicacy. Most undoubtedly, if books, reating of the human frame were more read and underood, the passions would be better managed or controuled, nankind rendered more virtuous and healthy, and many vils avoided into which inexperience plunges them. Why ould subjects, serious in themselves, be ever lightly treatd? Can even the sexual propensity deserve a more trifling iscussion, or advertence to, than that of any other animal ropensity, to which mankind are addicted? "Take name to yourselves, ye men of discretion," who wantonly in in such violations! The sexual intercourse is daily dverted to, by servants and superiors of families, *in the resence of children*, in a manner the most ambiguous and ysterious; a manner, above all others, calculated to awakn curiosity and enquiry; accompanied, as the subject al-

ways is, with much apparent interest, emotion, or risabil ty. It may be asserted with confidence, that more seriou injury has been excited in the morals and health of childre by this abominable conduct in their seniors, than by th whole train of children's usual bad habits put together Let, by all means, the passions be kept dormant as long a possible, yet let not any enquiry be evaded, but judiciousl answered, having regard to the age and constitution of th child; and let the structure of the human frame be explained accompanied by salutary admonitions and cautions. A German writer, the Rev. C. G. Salzmann, says, "Impurit is now spread so far that even children are infected, and b it the germe of every virtue, as well as the germe of the posterity, which the Creator has implanted in them, is de troyed." And adds, "I am thoroughly persuaded tha the most efficacious method to root out this dreadful evi which poisons the source of human happiness, would be t speak to children of the organs of generation as freely as w speak of the other parts of the body, and explain to ther the use which they were designed for, and how they ma be injured."

In this compilation we are indebted for a very considerabl portion of the important, salutary, and ingenious advic therein contained, to Dr. Faust's "Essay on a peculiar an national Dress for Children," translated from the Germar 12mo, Johnson, London; to Dr. Vaughan's "Essay, phi osophical and medical, concerning modern Clothing," 8vo Robinsons, London; and to Dr. Willich's "Lectures o Diet and Regimen," 8vo. Longman and Rees, London.

ON CLOTHING.

On the Custom of wearing Clothes.

"On a supposition that mankind had always been accustomed to wear clothes, it is not easy to conceive how any number of them should ever determine to throw them aside again, and go naked; because a regard to their health, which would suffer extremely by so disadvantageous a change, and a regard to modesty and shame will also ever incline them to the contrary: and yet we find the practice of going naked is still persisted in by several nations; which evidently indicates it to have been the natural, universal, and original state of all mankind. There are some nations who being accustomed to no defence for their bodies, never trouble themselves for any, even when they go to war, but whole armies of naked men engage in the hottest actions." [Charron "On Wisdom," b. 1.] "A great deal perhaps might be said against the necessity of an indiscriminate use of clothing in general, in the mildest seasons of every climate. It is plain, that custom only renders that impossible to us, which really is not so. For of those nations, who have no idea of clothing, some are situated under the same climate with ourselves, and some under much severer climates. And, besides, our most tender parts are always exposed to the air, such as the eyes, mouth, nose, and ears; and our peasants, like our ancestors in former times, go open breasted to the waist." [Montaigne, b. 1.]

The air, which has the most salutary influence on the vegetable and animal kingdoms, without which plants and animals wither, is by our clothes secluded from the body. This is a most pernicious effect of clothing, and makes the body wither also.

Clothing in itself, as well as by its form and artificial construction, impedes the insensible perspiration of the skin, by which the body is purified from malignant acrid juices. Besides as an obstacle to washing and bathing, clothes are the cause of much impurity and filthiness in the skin, and the whole human frame. Then only, when the skin has been habituated to the fresh cold air, will it bear the much denser colder element of water. This axiom explains why reason alone is insufficient to introduce the salutary practice of bathing among our modern civilized nations—our delicate skin shrinks from the touch of cold water. The skin has not only evaporating but also absorbent vessels, without number. The atmosphere of acrid vapours and mephitic air, created round the body by warmth and perspiration, cannot be dispelled by the fresh external air on account of our preposterous mode of clothing. These acrid vapours and mephitic air are therefore re-absorbed by the numberless vessels of the skin, hence it is evident why the body and the life of man are so wan, feeble, and joyless. The heat and vapour generated by clothing and the want of fresh air, enervate the body, subject it to frequent colds, and rheumatic complaints, which are the lot of almost every mortal.

By this heat the human body, like the plant in a hot house, ripens sooner than it ought to do in the common course of nature.

On the Materials of Dress.

The property of receiving, repelling, and emitting heat and cold, depends not only on the substance from which our dress is made, and its shape and form, but also on the colour. Clothes of a light colour have the least attraction for heat, and therefore are the most proper in hot weather.

Dazzling colours are offensive, and a person who suffers from weak eyes will injure them still more by wearing crimson or scarlet, or being much in company with others thus dressed. For a similar reason, splendid white dresses, steel-buttons, gold and silver lace, and all ornaments of this sort, are detrimental to vision. ANIMAL WOOL produces a moderate warmth, on account of the stimulus and gentle friction it occasions on the skin. By its use, animal electricity is elicited, perspiration promoted, the perspired humours are absorbed, and again easily evaporated, on account of the porous nature of this substance. This covering may therefore be particularly and strongly recommended to those afflicted with rheumatic or gouty complaints. LINEN CLOTH, by diminishing the elasticity of the skin, increases the internal warmth, and, at the same time, by its compactness, retains too readily the perspirable humours, and does not part with them so readily as wool. Soiled shirts therefore produce a disagreeable cooling sensation, and stop perspiration, especially if made of thick strong cloth, and not regularly changed. SILK occasions a gentle stimulus, but does not sufficiently promote perspiration, tho' it attracts less humidity from the atmosphere than linen. OIL-SKIN, or wax-cloth,

increases perspiration in an uncommon degree, but does not admit it to evaporate again, and is therefore applicable only in certain diseases.

Cotton stands between animal wool and linen; it increases warmth and perspiration, imbibes and retains the perspired humours, to the injury of the wearer, and, like wool, readily attracts infectious matter. All kinds of Fur are more noxious than useful, both with respect to their structure and constituent parts. They contain many alkaline and oily particles; the leather is too compact and does not suffer the perspiring particles to fly off. The consequence is, that a continual vapour-bath is formed between the fur and the skin, that a great part of the impure matter is again thrown back on the body, and imbibed by it. Fur soon acquires an intolerable smell, and more than any other substance attracts and retains contagious effluvia. Experience informs us, that nations who dress in fur, particularly in hot countries, are frequently exposed to diseases, owing to a want of cleanliness and free perspiration; such are the putrid fevers of Hungary, the plague among the Turks, and the singular disease of the hair in Poland, called *plica polonica*, which curls the whole hair into a number of twists, that have the appearance of so many greasy strings, and afford a ghastly spectacle. We ought, therefore, to choose a dress agreeable to the season and weather, as well as to the constitution of the body. In our variable climate, it would be preferable to adopt a species of dress, which is nearly uniform in all seasons. There appears no danger in doing this; on the contrary, it is the most beneficial plan of managing the body, with regard to the most important function, namely, that of perspiration.

On covering the Head.

Coverings of the head are very detrimental to healt of body and mind. The brain receives one-fifth of he whole mass of the blood, and eight times more han the other parts of the body. [Haller "Element. Physiolog." t. iv. l. x. sec. v. § 20.] The warmth occasioned by covering the head increases the quanity still further, and if in addition to this the veins of the neck are pent up, and the reflux of the blood impeded by shirt-collars, stocks, and cravats, a perennial accumulation of the blood, and pressure of the brain, are inevitable, the whole frame languishes under a slow paralysis:—stupidity, drowsiness, indolence, and lameness must be the consequence; the secretion of the nervous fluid in the brain goes on heavily, and cannot vivify body and mind; the turgid brain is incapable of clear sensual impressions, and man staggers through life, void of sense, reason, and joy. Vermin and scaldheads are another consequence of warm coverings of the head and want of fresh air; the mischief they do is astonishing, they are certainly to be reckoned among the great plagues of the human race. The head naturally has a small inclination to the earth; by the weight of coverings it becomes depressed; this is an additional reason for abolishing coverings of the head in the dress of children. For some years the ladies, instead of those horrid masses of frizzled hair, which used at once to injure their health, and disfigure their faces, happily returned to beautiful and elegant nature; having their hair hanging down in graceful ringlets, while the only artificial covering was a simple turban, or an ornamental bandeau. Of late,

however, this tasteful style of decoration has bee succeeded by unnatural, disgusting, and unhealthfu *wigs;* a fashion probably introduced by some ugl and bald woman, to reduce her gay and beautifi imitators to her own standard of deformity.

The well known and excellent rule, of keeping th head cool and the feet warm, is too much neglected especially by the lower classes of the people in man countries, as in Scotland, Holland, and Germany and likewise among people of a certain age and des scription in this country. The Scotch peasant wea his heavy bonnet, the Dutchman his cap, and th Turk his turban, without considering that such heav loads are stupifying, and that, while no attention i paid to keeping their feet warm and dry, their head are virtually converted into vapour-baths. In all coun tries the man who lives at his ease, carefully cover his head with a warm night-cap; he spends perhap one half of the day in this unnatural dress, and pre pares his head for frequent colds, at every sudde change in the atmosphere. Besides, weakness of th head, pains, eruptions, local plethora or fullness c blood, loss of the hair, lethargy, and at length stupe or insanity are often the effects of this imprudence In our moderate climate we might safely accustor our youth to go with the head uncovered; as natur has already provided it with hair for that purpose In very cold or hot countries, however, the hea must be slightly covered to shelter it from cold, c from the still more dangerous vertical rays of th sun. To go with the head uncovered, in sunshine is certainly improper, both for children and adults but black hats are ill calculated to avert the mi chief, as they do not reflect the heat, but rathe

concentrate it in the most sensible manner upon the head. This property of colour has been frequently demonstrated by placing black and light drab-coloured pieces of cloth upon snow, while the strong rays of the sun have fallen upon them. The snow began to melt round the black, while that about the light colours was not more affected than the snow upon which no pieces were laid. A burning lens will set fire to dark coloured substances, while light colours are with difficulty or not at all affected. Hats of a white, or other light colour, made of straw or similar light materials, would be far preferable, particularly for people labouring in the fields, soldiers, and travellers. In very hot weather, a piece of white paper may be fastened with advantage upon the crown of the hat. As the hat ought likewise to shelter the eyes from too vivid a light, the brim should be broad enough to protect them, and the inner side of a green or blue, but not of a black, nor a dazzling colour.

Persons suffering from periodical head-achs, or whose heads are otherwise unhealthy, should have their hair cut short. By this petty sacrifice, they will promote the necessary perspiration, the head will remain cool, and the cold bathing of it can be practised with more advantage. In this point of view, wigs cannot be *altogether* condemned, as long as hair-dressing, artificial braids, and other ornaments, form an essential part of fashionable dress. A *light wig* is justly preferable to a head enveloped in an artificial paste of powder and pomatum. The ancients went with their heads uncovered: Suetonius says of Julius Cæsar, "He was perfect in the use of arms, and in equestrian exercises, inured to labour beyond conception: he marched at the head of his

troops, sometimes upon horseback, oftener upon foot, bareheaded, whether it was rain or sunshine;" [Suetonii Jul. Cæsar. p. 45. Lugdun. Batav. 1645.] and Silius Italicus says of Hannibal, "a noble leader of the thronging host, the Carthaginians saw him give the rule, his head uncover'd, heedless of the storm." [Silius Italicus, l. 1. v. 249—252.] "King Massinissa, to an extreme old age, could never be prevailed on to go with his head covered, how cold, stormy, or rainy soever the weather might be; the same thing is related of the emperor Severus. Heroditus says, that in the battles fought between the Egyptians and the Persians, it was observed, both by himself and others, that of those who remained dead upon the field, the heads of the Egyptians were, without comparison, harder than those of the Persians, because the latter cover their heads from their infancy, first with biggins and then with turbans, whereas the former go always shaved and bare. And king Agesilaus, to a decripit age, made it a rule to wear the same sort of clothing in winter and summer. Plato strongly advises, for the health of the whole body, to give the head and feet no other covering, than what is bestowed by nature." [Montaigne, b. 1.]

"I would advise little or no head-dress at any season. As it is of consequence, therefore, that the bones of the skull should become hard and compact, the better to defend the brain, not only against contusions and fractures, but also against colds and defluxions, you should accustom your children to go both winter and summer, by day and by night, bareheaded." [Rousseau's Emilius.]

Neck Bandages.

The nerves, arteries, veins and muscles, which run along the neck up to the head of the wind-pipe, the organ of speech and song, as well as the wind-pipe itself, are much injured and debilitated by stocks, and other bandages round the neck, which, tho' in general worn by males only, operate nevertheless on the female sex by propagation. Compressing the neck has caused a loss of voice; [Hist. de l'Acad. de Paris, 1705.] and injuring the muscles of the larynx, weakens the voice, because these muscles receive nerves from the recurrent branches of the eight pair. "I have seen," says Dr. Willich, "several instances of people attacked with shortness of breath and difficulty of speech, from this reason only, because the blood cannot circulate freely, if the neck and wrists be tied or buttoned up too closely. I was once present where a young man, playing at rackets, was suddenly seized with an apoplectic fit, the cause of which seemed at first inexplicable. As soon, however, as his shirtcollar, wristbands, and garters were looseend, he recovered." Neck-cloths, cravats, ribands, and necklaces of all sorts, *when they are too tight*, stop the access and retreat of the blood to and from the head, occasion accumulations of the blood and other fluids, head-achs, faintings, stupor, apoplexy, corrosive ulcers of the skin, and innumerable other maladies. All coverings of the neck ought therefore to be constantly worn loose. People who are liable to sore throats, and diseases of the breast, might gradually accustom themselves, in mild and dry weather, to go with their necks as slightly covered as possible, and if fashion would

permit it, to have no other covering but the collar of the shirt. In cold and moist weather, a thin handkerchief might be added. But the modern cravats, filled with a stiffening of cotton or wool, are extremely injurious to the part which they are intended to protect. For, by occasioning too great heat, they render the neck unnaturally sensible to every change of the atmosphere. It is rather surprising, that from a due sense of their perniciousness, we have rejected all coverings of the neck in children, as being troublesome and useless; and yet, in defiance of reason and experience, we continue to incumber our own necks with such bandages. Neck-laces and ribands, likewise, are generally tied so close, as to press with violence upon that supposed deformity of the throat, vulgarly called Adam's apple, which projects less in the female than in the male sex. These ribands and neck-laces, when worn tight, are the more inconvenient and dangerous, if they be narrow and edged. On taking them off, which is too frequently neglected at night, they leave an impression on the neck, clearly proving the impediment they are to free muscular action, and what stagnations, pain, and dangerous consequences they may occasion. The neck and throat, being alternately expanded and contracted, in speaking, chewing, and swallowing, it is the highest degree of imprudence to obstruct its motion, for the sake of appearance, vanity, or fashion. Equally objectionable are those black stocks, that were formerly much in fashion, and are still worn by some old beaux and military men. The latter, indeed, deserve our compassion, from being obliged to wear those uncomfortable collars; but the former ought to consider, that they expose themselves to dangers, in-

creasing as they advance in age, and rendering them every day more liable to apoplexy. "I knew a regiment of soldiers on the continent," says Dr. Willich, "whose colonel was so excessively fond of what he considered a martial appearance, that he caused his officers and men to have every article of their uniform remarkably tight, particularly the stocks, waistbands, and knee-garters. The consequence was, that in the course of a few months, above the half of his regiment became subject to very obstinate cutaneous diseases, and other obstructions, so that they were unable to perform duty. Other regiments in the vicinity also suffered from this destructive custom; but the proportion of their disabled soldiers was like one to ten of the former." The late Dr. Fothergill asserts, that these tight stocks are productive of apoplexy, if a person look for some time, with his head turned, without moving his body. By this alone, he believes, people have brought on apoplectic symptoms. For such a turn of the neck, when the body stands fixed, diminishes the diameter of the jugular veins so much, that a proportionate quantity of blood cannot return to them, from the vessels of the head and the brain.

Coat and Gown Sleeves, &c.

The arm of a woman is by nature somewhat taper from the tip of her shoulder, becoming smaller downwards to her wrist; but that of a man is always, or ought to be, largest a little below his elbow. Hence it appears why the sleeves of a woman's gown may compress generally, and why the sleeves of a man's coat can only compress partially. Very tight coat sleeves prevent the hand from grasping and holding any thing long; and if nothing be grasped the veins

upon the back of the hands will swell. Neither can a person write in such sleeves, or with proper steadiness and command; nor lean upon a desk without benumbing the fingers. Now if partial compression below the elbow can excite such inability and pain, what may not the general compression of a woman's sleeves excite? The ends of shift or gown sleeves, whether they be simple hems, or bands, like the wrist-bands of a shirt, may compress in a very great degree: for they yield little, or not at all, when the arms are moved. The ends of shift sleeves compress like the ligature applied previous to blood-letting; and they have been known to compress as much. Instances are not wanting where the gown sleeves were so tight that the blood could not be stopped till they were cut.

Stays, Waistcoats, &c.

The tightness of our clothes, and the different bandages of which they consist, compress the veins and lymphatic vessels immediately under the skin and injure the animal economy exceedingly.

The weight and pressure of our heavy tight clothing cramp the whole frame, and particularly narrow the breast. That our bodies are cramped is ascertained beyond a doubt (proofs of it may be found in the *Recherches et Considerations sur la Population de la France*, par M. Moheau, tom. i. c. 9). That our breasts are compressed and narrowed to an unnatural degree during our childhood, when cartilages, ribs, and spine, are soft and pliable, is evident; for we Europeans, cramped and disabled by our clothes, cannot swim. As the strength and virtue of man chiefly depend on a strong roomy chest, the

want of it must be a capital defect, and a strong proof of degeneracy. Narrow chests are the cause of debility, short breath, drowning in water, and diseases of the breast, which destroy a tenth of the civilized part of mankind. That excellent anatomist Sœmmering, says expressly, "the chests of three male negroes were large, roomy, and more arched, than those of Europeans; this is very visible even in the fine natural skeletons, tho' they have lost nearly two inches, French measure, in height, by exsiccation." [Sœmmering on the Difference of Structure between the Bodies of Negroes and Europeans, p. 31. § 34.] This ingenious anatomist also remarks, that the Negro has great advantages over the European in the structure of limbs and bones; the cause of this can be no other, than that the former is free, and the latter shackled from his birth. A diver at the Sandwich Islands was seven minutes and a half under water. [Voyages made in the years 1788 and 1789, from China to the North-west coast of America, by J. Meares, Lond. 1790.] Could this diver die of a consumption? The pressure of the female dress upon the breasts not only enfeebles and spoils the breasts, but in a great measure destroys the nipple, even during childhood; many new-born infants suffer exceedingly on this account. And tho' the nipple may not be totally destroyed, it is always poor and feeble, witness the excuciating sufferings of mothers from sore nipples, by which they are often rendered incapable of suckling their children. As the circumference of the breasts of women is generally as high as the inferior margin of the second true rib, so as precisely as can be ascertained, stays are generally made to extend as high as the third true rib, or the

space betwixt it and the second. Modest women always take care to hide the nipple, and some hide the whole hemisphere of both breasts. It is sometimes fashionable to extend the stays almost as high as the first rib. Stays seldom or never reach quite so low as the umbelical region, being in general more than two inches above the navel. The ladies of England prefer long petticoats and long legs to short, making themselves resemble the Mogul women who have naturally long legs and short bodies. It follows, that stays which encircle the body, from the second or third rib down to the end of the epigastric region, by being made to compress much, necessarily lessen the capacity of the *thorax* and *abdomen*, and not only compress the contained viscera, but propel them out of their proper situation. "I have known," says Dr. Vaughan, "the *sternum* more than an inch deep, the anterior extremities of the ribs of one side bending over so as almost to meet the anterior extremities of those of the opposite side, which were bent in a similar manner. I have known instances in which the ribs of one side only projected forwards over the *sternum*, proceeding almost straight from the *vertebræ* of the back, and giving the appearance of a sharp edge. I know a lady, whose *sternum* is so placed that its right margin, together with the affixed extremities of the right ribs, is turned directly outwards; its left margin, together with the affixed extremities of the left ribs, being turned inwards. It is a most unseemly sight; for the right side, which is sharp, projects far beyond the left. These are vulgarly called goose-breasts. They are narrower than they ought to be. That stays should induce such effects can hardly be wondered

at when it is recollected that at birth the *sternum* is cartilaginous, consisting of several parts, and that the ribs throughout life are cartilaginous at their connection with the *sternum*. For cartilage is easily bent, and is easily made to assume various figures. A lady did me the favour," continues Dr. Vaughan, "to lace a pair of her stays upon me, such as are worn by the fashionable world. She was a handsome woman. She was tall, and, as it was agreed, well proportioned. I did not acquaint her with the object of my curiosity in wearing her stays, lest she should wantonly cause me to think worse of stays than they really are, or cunningly serving the turn of her own sex, cause me to think better of them. When she had laced them on, I wore them about ten minutes; during which time I put myself into a variety of attitudes, more particularly into those which females are oftenest in. Thus I endeavoured to form an opinion of the manner in which stays do harm. Where the capacity of the breast is greatest, there I found the stays press most. And as their pressure hindered me from making a full inspiration, I soon felt such a lassitude and weight at the *præcordia*, that I thought I should have fainted before they could have been taken off. And even when they were taken off, and for some time afterwards, I breathed difficultly, felt as if my lungs had not room enough to be dilated in, and was both extremely weak and sleepy. I felt the greatest pressure where the ribs are naturally moved most: and it is clear to me that women who are tightly laced, notwithstanding the mobility of their breasts, cannot move the intercostal muscles at all, or cannot move them enough for a perfect inspiration. In healthy respiration the diaphragm

is certainly more employed than the intercostal muscles, the ribs, except the first, being raised upwards and outwards at the same time: but in morbid respiration, even the first rib, which is commonly fixed and immoveable, is raised, and the inferior margins of all the ribs are forcibly turned upwards and outwards. I will not venture to affirm that tight lacing renders the muscles which raise the ribs immoveable. But as compression renders muscles immoveable in other parts, I think it must have a tendency, at least, to do so in this part. And if I be not much deceived, I have more than a hundred times observed women tight laced who were obliged, after eating, dancing, &c. to employ even those muscles to raise and dilate the breast, which, in common, vital, healthy, respiration are not employed at all: so that they breathed as laboriously as if they had been in a fit of spasmodic asthma. But the contents of the abdomen and pelvis suffer from such pressure as much as those of the breast: and whoever reflects on the position of the diaphragm, its being higher anteriorly than posteriorly, the attachment of its middle part to the mediastinum, and that only its lateral parts lying directly under the lungs descend in inspiration, will readily perceive that if its position were horizontal, the chest could not be so much enlarged as it now can, and that the viscera of the abdomen would be perpetually liable to disease from being compressed into too small a space, and against the unyielding pelvis. Hence it appears that stays which press against the muscles of the abdomen prevent their yielding, and force the contents of the abdomen backwards and downwards, and by obstructing the necessary expansion of the lungs." Mr. White says, "Lacing the stays

tight has been practised not merely in conformity to the rules of fashion, but from a mistaken notion that by pressing the children lower down, the mothers would have better times. This is one of those vulgar errors which have not the least foundation in either fact or reason. I never yet knew children lie too high. In their natural situations they are much less inconvenient to their mothers; and are carried with greater ease; and the mothers have at least as good or better times than when they are pressed down too low, by which means the belly of the mother becomes pendulous, and the child is troublesome to carry; the inconvenience increases too with every child, and where the mother has had a great number, he weight at last becomes intolerable. The constant pressure of the *uterus* upon the bladder, in this case, occasions frequent motions to make water: an incontinence or involuntary discharge of it sometimes comes on, and it is attended with many other inconveniencies." But independent of pregnancy, what evils do we every day observe in those who wear stays? Do we not find instances, particularly in fat people, of herniæ exomphalos, or rupture at the navel, in which even the stomach, the liver, and the spleen are protruded? Women are indeed more subject to this disease in the latter months of pregnancy: but is not the reason obvious, the stays pressing the viscera downwards and not leaving room for the uterus to expand in? Does not abortion often ensue from this? From what has been said on stays and their effects on the thorax and abdomen, the effects of tight waistcoats, &c. may easily be understood. It seems more than probable that an unequal distribution of blood and other fluids causes particular congestions in the vis-

cera, and consequently inflammations, hemorrhages and similar diseases. When the capacity of any viscus is diminished, e. g. the lungs, as the quantity of blood sent to them remains the same, any thing that increases the force of the circulation, whether heat, exercise, or passions of the mind, may cause inflammation, hæmoptoë, asthma, dropsy of the breast, and consumption. A sufficient quantity of air ought to come into contact with the blood of the lungs at each inspiration. When this meeting of blood and air is lessened or stopped, emaciation and weakness supervene, as if the blood had lost its power of nourishing for want of air. The dress of the female sex is very exceptionable. How far it is elegant and tasteful, may not properly be decided here. "It is well known, that a loose and easy dress contributes much to give both sexes those fine proportions of body, that are observable in the Grecian statues, and which serve as models to our present artists; nature being too much disfigured among us to afford them any such. The Greeks knew nothing of those gothic shackles, that multiplicity of ligatures and bandages with which our bodies are compressed. Their women were ignorant of the use of whalebone stays, by which our's distort their shape, instead of displaying it. This practice, carried to so great an excess as it is in England, must, in time, if continued, degenerate the species; and is an instance of bad taste. Can it be a pleasing sight to behold a woman cut in two in the middle, as it were, like a wasp? on the contrary, it is as shocking to the eye, as it is painful to the imagination. A fine shape, like the limbs, hath its due size and proportion; a diminution of which is certainly a defect. Such a deformity also would be striking in

naked figure; wherefore, then, should it be esteemed a beauty in one that is dressed?" [Rousseau's Emilius, b. 4.] It has always been known that men and women are naturally attracted by each other; and it is almost certain, that if those women who lace tightly, from a desire to please men, had found by experience that instead of rendering themselves more lovely, they were more disliked, they would have remained content as nature made them: so that the fault is more in the men than in women. The garments of women, which begin and end upon the hip, in a manner divide the body into two separate parts; the course of the air from below is obstructed; above and below are heat and vapour. The heat and vapour *below* generate uncleanliness, weakness, relaxation, fluor albus, sometimes ruptures, and often prolapsus uteri. In high life many women and girls wear drawers—an abominable invention, which produce those disorders in abundance. *Above*, the breasts grow weak, relaxed, and flabby, and furnish very indifferent food to the new-born generation. "Life, health, reason, and convenience, ought to be taken first into consideration. Gracefulness cannot subsist without ease; delicacy is not debility; nor must a woman be sick in order to please. Infirmity and sickness may excite our pity; but desire and pleasure require the bloom and vigour of health." [Rousseau.]

Fortunately, *laced stays* are among the higher ranks of society, at present, out of fashion, and the Grecian costume is very justly preferred; but so transitory is fashion, and so little founded on reason, that the example of a court lady is amply sufficient, to introduce again, the *strait jacket*, with its extremes of ungracefulness and evil; and amply as the Grecian form

allows women to dress at ease, it is observable tha tight coverings are yet predominent. All that ha been said respecting laced stays, is also applicable t tight coverings of the breast and abdomen. If suc a dress as stays be admissable they should be mad of soft and pliable materials, as the knitted and elasti substance used for stockings or gloves. How absurd ly does fashion vary in extremes! The unnatura and unhealthful custom of tapered waists had n sooner been relinquished, than the fair sex endeav oured to conceal the waist entirely. Instead of a cincture round the middle of the body, as nature an taste directed, they bound themselves over the breast —a custom not less preposterous than injurious t health.

Gloves.

It is improper and unhealthy to wear any other bu woollen gloves, which ought to be worn by all fe males, who wish to improve the skin of their hand and arms; no cosmetics or washes are so certain an so powerful in their effects: on the contrary, all ex ternal applications, unless assisted by internal reme dies, are attended with the positive ruin of skin bloom, and health.

Leathern Breeches.

The compression of tight leathern breeches, how ever general, is not always equal. Every man may have felt, at some time, a numbness of one or both inferior extremities, from sitting upon a hard seat. This sensation is frequently induced to the same de gree by wearing a tight pair of leathern breeches, and remains for many hours after they are drawn off. Elastic leathern breeches frequently cause a numb

ness and coldness of the external part of the thighs and hips, a painful pressure of the *pudenda*, and are undoubtedly a very improper and injurious article of dress. They are certainly handsome, and very fit to expose a muscular thigh; but they are inconvenient in walking. The most convenient form of this vestment is, on the whole, that of *pantaloons*, if made sufficiently wide, of a thin cooling substance in summer, and of a warm elastic woollen-cloth in winter. Leather is an improper substance for this part of dress; as, on account of its close texture, it is apt to check insensible perspiration. If the waist-band be too strait, the free motion of the internal parts of the abdomen will be obstructed, the absorbent vessels of the intestines prevented from performing their offices, and hypochondriacal complaints be easily induced. This inconvenience may be entirely avoided, by the use of *braces*, now almost generally adopted, and which, as they render a tight cincture altogether unnecessary, cannot be too much recommended both to men and women, for the sake of health as well as comfort.

Garters

are worn both above and below the knee; but they are equally improper in both places. They cause a disagreeable appearance and unnatural hardness of the part. They dispose the legs to dropsy, render walking tiresome, and are a very common cause that many stumble, fall, and dislocate or break their knee-pans. Garters are unnecessary to men, except when wide pantaloons are used, and then a good way may be to suspend them by tape to the waist. A still better method, in this case, is to wear a kind

of stocking made on purpose, rising about midway up the leg and of sufficient elasticity to keep up. If females cannot do without garters they should garter loosely below the knee, with worsted stuff, as elastic as posible; but if any contrivance could be adopted in their place, it would amply compensate for any little trouble. The stockings might certainly be easily tied to some tape fastened to the waistband, or other part.

Stockings.

There is not a greater and more important emunctory in the whole human system than the feet. The connection between the feet and the head, the stomach, the uterus and the urinary passages is such that fits of the gout, suppressions of the menses, and pains resembling those of the stone are frequently and almost instantaneously brought on by cold applied to the feet. I am even persuaded, says Dr. Vaughan, that cancer, inflammation, and even abortion are frequently occasioned by wearing cotton and silken stockings. Cotton, like linen, once saturated with the moisture discharged from the feet, can receive no more: and as it can part with little or none at all to the atmosphere, the excretion must be more or less impeded, and a sense of coldness and clamminess must be inevitable. Nothing stops the excretion from the feet sooner and more effectually than cold. Nor are facts wanting to convince those who are open to conviction that cotton worn next the skin is a plentiful source of uncleanliness. Let any one desirous to see it proved, wear cotton stockings one day and worsted the next, and afterwards say which was the more free from humidity and smell. Cotton saturated with the sweat of the feet (and cotton

can contain more than linen), soon rots. Cotton stockings will not last nearly so long as worsted for this very reason. Mankind seem ignorant of the calamities which may arise from the spontaneous changes which the sweat of the feet, stagnating in the stockings, undergoes; of the calamities which may arise from the mutual action of the sweat and the leather and its impregnations. In short, they who wear cotton stockings ought, from regard to delicacy as well as health, to change them once a day.

The use of socks or worsted feet, within cotton stockings would be attended with advantage; or, which is still better, cotton stockings with worsted feet. As to the legs they require no covering; and it would be far better if they were exposed to the air. It is scarcely necessary to mention silken stockings: they are so thin and such easy conductors of heat, that they are never worn alone by prudent people, but over worsted or yarn. There can be no great objection to this custom. Altho' the feet are as great and important an emunctory as any in the human body, yet it has never been proposed, to solicit a discharge from them. On the contrary it has been repeated as a rule, particularly in the polite world, that suppressing their discharge is the most certain and effectual method of keeping them dry and free from smell. Hence old women have set about suppressing the discharge, and an unsuspected fatality must often have overtaken the unwary who confided in their anile injunctions. Dry feet are preferable to moist; but those means which encrease their perspiration are the only means which can preserve them dry, and prevent their smelling offensively. No person can seriously doubt the importance

of a free perspiration from the feet. Keeping the feet in warm water has frequently removed pains and even inflammations of very distant parts; and a copious discharge from them has in all such cases been known to precede the cure. So that if the pain and inflammation were not caused by suspension of the perspiring faculty of the feet, they were at least certainly cured by exciting or increasing it.

By what change of clothing then are the feet to be kept dry and free from smell? When we run and when we dance do not our feet perspire much, and do not the feet of some become clammy and offensive after such exercises, within a short time, notwithstanding all their endeavours to prevent it? Our body perspires most when it is driest, and dryness is preserved by wearing such a covering as conveys away the vapour perspired before it has time to condense into a fluid form. Such a covering should be woollen. Therefore if persons wearing cotton, thread or silken stockings feel a coldness and clamminess and if their feet exhale a disagreeable smell, it is because their stockings instead of conveying the vapour perspired away before it changes its form, absorb and retain it in contact with the skin, in a heat most favourable to putrefaction, and thus obstruct all future perspiration. Our feet are not as easily kept dry as our bodies; for the vapour of the skin after passing through even worsted stockings must in some measure be secluded from the atmosphere by the leather of the shoes. Be this as it may, worsted stockings convey the vapour from the feet, and do not readily retain it condensed: so that if the vapour only assume a fluid state, on the outside of the stockings, between them and the shoes, we are at leas-

more likely to feel less coldness and clamminess than if we wore stockings which more readily absorb water than vapour. But the most disagreeable sensation which they ever feel, whose feet sweat, is between the toes. Here it is that the more fluid part of the sweat being absorbed, leaves the gross and glutinous part to accumulate and putrefy. This can only be prevented by presenting even to the skin, between the toes, a woollen covering; in other words, by making our stockings with toes, as we do our gloves with fingers. That the feet are more exposed to the effects of cold, and to stagnations of the fluids, than any other part of the body, is unquestionable: 1st, Because they are the most remote parts from the heart, and the quickness of the circulation of the blood decreases in proportion to that distance; and 2nd, The blood circulating downwards makes its way to the heart somewhat slower, on account of its own gravity. By this slowness in the circulation, more watry particles are deposited by the blood. It is therefore necessary to keep the feet somewhat warmer than the rest of the body, in order to encourage the motion of the fluids to the upper parts. For the same reason, it is proper to prevent all moisture from without, by means of water-proof shoes, provided with cork soles, for the winter, or with elastic socks of horse hair.

Boots

made too small, and of thick hard leather, are so pernicious to health, and so disagreeable in walking, that it is surprising any sensible being should confine himself in them, for the silly purpose of shewing (as nearly as such an unmanageable a material as leather

is capable of) the shape of his legs. The effect which they occasion may easily be understood from what has been said, and from what is more to be explained hereafter. The constant use of boots contracts the size of the legs, particularly the calves, as may be observed in military men, and the fashionable loungers of Bond-street, and Pall-mall.

Shoes.

How frequently do we smile at the Chinese who, from a tyrannical custom, squeeze and compress their feet, that they may remain small and crippled. Yet these feeble Orientals proceed more rationally in this practice, than their European rivals. *They* begin with it gradually, and from the earliest infancy. *We* do not think of contracting the feet of our children, till they have almost attained the natural size, and thus endeavour to counteract the progress of nature, when it is too late to do it with impunity. Our knees would be more flexible, and our toes more pliable, more useful, and better adapted to perform the various motions of the feet, if they were not continually pressed and palsied by this improper *case-work*. Nature has designed the toes to be as moveable as the fingers. Examine the feet of a peasant's child who has never worn shoes. Instead of the toes being crooked or bent inwards to a point they are straight as their fingers, and the inner side of the foot forms nearly a straight line from the heel to the tip of the first toe. Those unfortunate beings, who are born without hands, learn to perform with their toes the most astonishing tasks, to write and cut pens, to sew, to draw; in short, to supply almost completely the want of their hands. Our feet would

he more comfortable, easy, and useful, if we were not at the greatest pains to deprive them of their elasticity and vigour. The numerous nerves crossing them, in every direction, plainly evince that nature has endowed them with peculiar powers, of which we can scarcely form an adequate conception. Why are mankind determined to convert the natural shape of the foot into a geometrical figure? or why do they not take it into their heads to new-model some other part of the body, which may happen to be irregular in its form? He who is regardless of the pain and trouble occasioned by warts, excrescences, and callosities of various forms; he who wishes to convert his feet and toes into so many barometers, to indicate the present state, and to foretel the future changes of the weather, will ever agree with his shoemaker, to save as much leather as possible; and he is scarcely to be pitied for his imprudence. But such a person cannot pretend to walk, and if he be unable to provide a horse or a carriage for his excursions, he must submit to abridge himself of many pleasures; and such cessations from exercise are undoubtedly extremely detrimental to health in general, and they may be registered among the pre-disposing causes of the gout, rheumatism, and dropsy. Many people are thus almost deprived of the use of their legs; and the pain of the more virulent species of corns, as well as of the nails, when grown into the flesh, is excruciating. For these obvious reasons the sole of the shoes ought to be sufficiently broad, and easy; in short, they should be made to the *natural* form of the foot. It is astonishing that mankind, almost with one consent, should determine to become the vassals of fashion. Not long since they deemed

the foot handsome when it was compressed by an instrument into a shoe a full inch shorter than is necessary for a free use of the foot; at present, the foot is deemed handsome by being reduced to a narrow and long pointed shape. Instead of bending the toes with their nails inward, they must now be squeezed together so as to lie one over the other. 'T is however fortunate that such folly is sometimes rebuked on striking the foot against a stone, if reflections on the evil be induced; but not even punishment can rouse some people to a sense of outrages against common sense and nature. A shoe ought to be made sufficiently long, with thick soles, and the upper-leather soft and pliable. If shoes be deficient in any of these requisites, the skin will be rendered callous; the perspiration indispensable to those parts will be stopped; warts and corns will appear in numbers; the nails will grow into the flesh, and various complicated maladies be produced, which not only affect the feet, but the whole body. Ladies only wear high-heeled shoes; but for what purpose it is difficult to say. It is certain they walk up hill better than men, but they cannot walk so well upon plain ground, nor can they walk down hill without danger of falling. The muscles inserted into the os calcis are contracted and shortened, and those of the top of the foot are elongated, distended, and weakened by high-heeled shoes. Shoes therefore should have low heels; and have the true shape of the foot, which at the toes is broad, the heel small, and the length of the inside is greater than the outside. They should be made from two lasts, as the shape of the feet indicates. The following figures demonstrate the propriety and necessity of a reformation in the

shape of shoes. Fig. 1 is the shape of the sole of a foot not compressed or deformed by small shoes. Fig. 2 shews how the sole of the shoe ought to be formed. Fig. 3 shews clearly that the shoes usually worn, made on one last, do not at all fit.

Fig. 1. Fig. 2. Fig. 3.

Each foot may be placed upon a piece of paper, and its exact outline drawn with a pencil, after which the lasts may be made, attending carefully to the shape of the different parts of the foot. In taking the size of the sole from the foot, it will be necessary to allow sufficient room for the toes, which are constantly pushed forward in walking, by the bending of the foot. By wearing this kind of naturally shaped shoes, a person will be able to walk with perfect ease, and, of course, a longer time; and corns will be effectually cured or prevented. With respect to the *substance* of which shoes should be made, no other general rule can be given, than that it ought to be sufficiently compact, to prevent the water from penetrating it; so elastic and soft, as to admit an easy

motion of the whole foot; and adapted to the weather, exercise, and soil in which it is to be used. To those who have not the means or opportunity of procuring the patent water-proof leather, the following method of preparing this species of leather may be adopted at a very trifling expense. One pint of drying oil, two ounces of yellow wax, two ounces of spirit of turpentine, and one ounce of burgundy-pitch, are to be carefully melted together, over a slow fire. Those to whom the smell of pitch and turpentine is unpleasant, may add a few drachms of some cheap essential oil, as of lavender, thyme, and the like. With this composition new shoes or boots are to be rubbed, either in the sun, or at some distance from a fire, with a sponge or soft brush: this operation is to be repeated as often as they become dry again, until they be fully saturated. In this manner, the leather at length becomes impervious to wet; the shoes or boots thus prepared last much longer than they otherwise would, acquire such softness and pliability, that they never shrivel nor grow hard and inflexible, and thus prepared, are the most effectual preservatives against cold and chilblains.

Advantages to be derived from wearing always one Kind of Covering.

Bears and foxes, which inhabit cold climates, can maintain the natural temperature in all seasons and be in health and vigour, with one and the same covering; why may not man maintain his natural temperature and remain in health and vigour, with one and the same covering also? There is no season or climate, however warm, in which bears, foxes, and many other animals are not covered with some hair;

and it often falls off even in the coldest seasons and climates. It seems natural that the old hair should fall off to make room for new; that the hair should be regenerated as well as the other parts of the body. And the hair being thicker in cold than in warm climates and in cold than in temperate seasons, does not prove that it is unnecessary in warm climates; and much less that any thing better might be supplied. The utmost it proves is that less might suffice. The more obvious advantages to be derived from wearing always one kind of covering may be easily understood from the following considerations. Uneasiness, itching, and pain most commonly attend the change of one kind of covering for another, even when there is no suspicion of dampness. A skin used to the feel of fine linen cannot bear that of coarse. The brother of Louis XIV, who was secluded from society in the Bastile of Paris is reported to have worn very fine linen, because coarse linen made him uneasy. [Mem. du Marchal Duc du Richlieu, &c.] Ann of Austria was under a similar necessity of wearing fine linen. A skin used to the feel of linen cannot bear, with equal pleasure, the feel of cotton. And flannel, which seems in its effects most like the hairy covering of animals, is regarded with a degree of antipathy by those who have long accustomed their skin to linen or cotton. Sir Benjamin Thompson says, there is no luxury greater than that of wearing flannel, when one is used to it. [Phil. Trans. v. 77. p. ii 240.] To change our apparel as often as the weather changes is attended with a great loss of time, and supposes a fit opportunity, and a certain degree of independence. Such time and opportunity are seldom at the dis-

posal of sailors, soldiers, and husbandmen.

Consider the dormouse: it is so clothed with hair, which slowly communicates heat, that Mr. Hunter could not freeze it, even in a freezing mixture, till he had thoroughly wetted its hair. [Observ. on certain Parts of the Animal Economy, p. 89.] And if such a reptile as this be qualified, by a covering of hair to maintain a similar degree of heat in all seasons and climates, will my reader believe that man might not also more effectually brave inclemencies of weather if he had such a covering? The practice of wrapping ourselves up in flannel at the approach of winter, changing it for calico at the approach of spring and autumn, and wearing linen only during the summer, is equally absurd and hurtful; many have fallen martyrs to it; for it prevails equally among the strong and the weak, those of thirty and those of sixty. Besides the temperature is seldom the signal for these changes, it is the day of the month! No man can certainly foretell what covering may be most suitable for to-morrow, and the states of the weather are too inconstant and variable for him to possess a covering proper for every one. People in ease and affluence tell us that clothes should be changed as often as the weather changes, appearing to have only the care of themselves at heart; for poverty will always preclude the labouring poor from the advantages of so frequent a change, provided it be ever so necessary. "There is a habit of body proper for persons who take much exercise, and another more suitable to the sedentary and inactive. The latter, preserving an equal and uniform circulation of the fluids, should be defended against the alterations of the weather; the former

passing from labour to rest, and from heat to cold, ought, on the contrary, to inure themselves to such alterations. Hence it follows, that studious, indolent, and sedentary people ought always to go warmly clothed, in order to preserve the body in the same temperature, as nearly as possible, at all times and seasons. Those, on the other hand, who come and go in the wind, sun and rain, who take a good deal of exercise, and pass most of their time in the open air, ought to be clothed lightly, in order to habituate themselves to all the vicissitudes and temperatures of the air without injury. I should advise both one and the other not to change their dress with the seasons; this shall be the constant practice of my Emilius: not that I mean he shall wear a winter's habit in summer, like sedentary persons; but he shall wear a summer's dress in winter, like the labouring people. The latter was the custom of Sir Isaac Newton, during his whole life, and he lived to be fourscore." [Rousseau's Emil. v. i. p. 226.]

On bearing Cold.

"It is to be hoped that men will begin to consider the folly and mischief of a warm regimen, which in health often prepares them for sickness, and in sickness often encreases the disease, and hastens death; a regimen which would be much more proper for one that is to have a sudden passage into a warm country, than for us who are to prepare ourselves for the bearing of cold; an inconvenience we cannot fly from and therefore ought to accommode ourselves, and which is neither formidable nor dangerous.

The inhabitants of England formerly went naked, and were more healthy than we are now. The peo-

ple of Canada, and all the cold continent behind Newfoundland, go much after the same manner, without any inconvenience from it, but are rather fortified against the accidents they would be subject to, if their pores were too much opened, and relaxed by too much warmth; and we may readily distinguish the rational from the savage part, by as thin a habit as decency will permit. It is strange that people should be fond of suppling their skins, and keeping their pores too open; as if a man did not really perspire, when there is no sensible moisture upon the skin. If men considered how much sweat impairs the skin, and inclines it to wrinkle, as Sanctorius remarks in one of his aphorisms, they would be fully persuaded that nature can make discharges by finer and better ways than those which are so perceptible, and that flannel is scarcely necessary on this side of old age. The nervous parts of the skin have certainly a very great elasticity, and are capable of being strengthened by good and suitable management, even to a habit, as well as those of other parts. When the glands of the skin throw out a very sensible quanty of sweat in some particular parts, these parts grow accustomed to the air, or other moisture, and receive little or no hindrance in their discharges from it; as we see the palms of the hands sweat copiously, notwithstanding the external air immediately striking upon them; and none are more strong and healthy than those who are accustomed to have their feet wet, without changing their shoes and stockings. The stomach placed in the midst of the body, and consequently exquisitely warm, is so adapted as to bear large draughts of the coldest liquor without the least danger or inconvenience, unless the body has

been extremely heated; and tho' its office seems to require great and continual heat, yet it is not obstructed in it by the admission of cold things; nor are its glands benumbed or constringed, so as to hinder the secretion of digesting juices; and can we suppose the fabric of the skin less perfect and exquisite, when by its position it is to be immediately subject to the effects of the external air? Can we think its vessels are not endued with a strength sufficient to answer the force and weight of the incumbent air? and its glands of such a make, as that the particles they strain shall be of so fine a texture, as to pass the skin, when it seems to us to be too close to permit any transition? The effects of too much heat is evident in the maladies of hot countries. Let us instance the disease of the cholic, which, when it seizes any one among us, the chiefest care is to be secured from cold. Now the cholic is the epidemical distemper of hot countries, and so common at Surat, that about noon the whole town will smell of assafœdita, which they mix in most of their dishes, to preserve them from that tormenting distemper, which the heat of the air (so far from exempting them) renders them liable to, by rarefying the blood and humours, and opening their pores; by which 'tis probable many among us bring on accidental cholics. When muffs were worn universally, men were accustomed to let them hang upon their bellies. I have heard a healthy man complain, that on leaving off his muff for a day or two he has been griped. Any one in the world will from hence infer, that keeping the part too warm prepared it for the ill effects of the air, and that the same may happen in any part of the body; so that it is folly for people, in most cases,

where the lungs are not concerned, to nurse up a distemper, which was at first perhaps in a great part owing to a tender way of life, and by continuing that course, must be increased rather than perfectly rooted out." [Fuller's Medicina Gymnastica.]

Advantages to be derived from a Woollen Covering next the Skin, contended for.

"How slowly a covering of wool transmits heat has already been observed in speaking of the dormouse; and the same experiments then alluded to, supply us with an unexceptionable proof that linen and cotton shirts and stockings subject us to more debilitating heats and more fatal colds than flannel. The dormouse could not be frozen even in Dr. Hunter's freezing mixture, till its hair was thoroughly wetted; and it froze afterwards as soon as if it had not been covered with any hair. The reason can be no other than this, that water communicates heat quicker than hair. In other words, the heat of the dormouse was so slowly communicated by its hair to the atmosphere, that its living powers being roused at the approach of the freezing mixture were capable of generating or extricating more heat as fast as the hair conveyed any away. "Every one knows how slowly wool attracts water; and it is proved by the most simple and satisfactory experiments that "bodies which are the most easily wet, or which receive water in its unelastic form with the greatest ease, are not those which in all cases attract the watery vapour dissolved in the air with the greatest force." [Phil. Trans. v. 77. pt. 2. p. 244.] "It is a mistaken notion," says Sir Benjamin Thompson, "that flannel is too warm a clothing for summer. I have worn it in the hottest

climates, and in all seasons of the year, and never found the least inconvenience from it." [Phil. Trans. vol. 77.] "And I can aver," says Dr. Vaughan, "that I have worn it several years, in summer as well as winter, in the warmest rooms, and under the most fatiguing exertions, without ever feeling the least inconvenience. Nay, since I have worn it, I have never once felt any complaint in my breast, which I frequently did before. In short, since I have worn it, I have never experienced an hour's ailment. "But why is linen and calico preferred to flannel? We are told, it is because flannel heats more than linen or cotton. Now, it must be allowed it is not the heat of our covering that is ever disagreeable to us, but its being soaked in sweat and confined next the skin. Did any one ever feel uncomfortable from mere heat? No; he could not: he can only have felt uncomfortable from his wet shirt sticking to his skin. "Flannel is preferable to linen, because with the former we can perspire without danger, and exercise ourselves without any unpleasurable feeling. But who can do so when linen is next the skin? If one dance with flannel next the skin, the perspiration is necessarily encreased, the matter perspired is conveyed through the flannel to the atmosphere, and the skin remains dry, warm, and comfortable. If one dance with linen next the skin, the perspiration is also necessarily encreased, but the matter perspired is not conveyed through the flannel to the atmosphere; much of it being condensed into a fluid state, retained in the linen, and kept in contact with the skin. Here then are two sources of heat, which those who wear flannel next the skin are never subject to; these are the condensation of the vapour of the skin (all vapours in becom-

ing fluid and all fluids in becoming solid giving out heat) and the greater capacity of linen for heat.

"Suppose, again, that after dancing and perspiring greatly, necessity obliges me to go into the open air. I have done it many times with flannel next my skin; but I never caught cold by it, nor did I feel uncomfortable. And doubtless the reason is because my skin was kept dry by the flannel conveying away the matter perspired before it lost its form of vapour. Suppose after dancing and perspiring freely, necessity should oblige one, with linen next his skin, to go suddenly into the cold air; what will be his sensations! what his risque! His linen will be soaked in sweat, and, like every thing excrementitious, disgustingly stinking; he will feel cold and shiver, his teeth will chatter, and it is a thousand to one but he catches cold; a hundred to one but his lungs become inflamed; for he is subjected to a source of cold, which those who wear flannel next the skin seldom or never are: this is the evaporation of the condensed fluid from their linen, which will be greater in proportion as it is exposed to the more wind. "Thus it appears how effectually a covering of wool can defend our bodies from sudden and excessive heat and cold; how exactly it co-operates with the powers of generating heat and cold in living systems, and how constantly it preserves us in that temperature which is most pleasurable as well as most natural and beneficial. "As to the benefits derived from flannel as an electric I cannot conveniently enlarge on them. [See Brydone's Tour through Sicily, &c.] It must suffice, at present, to have proved that heat and dryness are necessary to perspiration [See Home's Med. Facts and Exper. p. 245]; and that our clothes

never feel so pleasant as when the matter perspired and the evaporation from our clothes are in such a given ratio to each other as to preserve us dry.

"I shall now recite the most common objections which people make to flannel, or at least all I know. It is said that flannel always weakens, but especially when worn next the skin. This is the first objection; and a more ungrounded one there cannot be. It is said that flannel weakens by causing too great a perspiration; and hence some people avoid it as they would swallowing a large dose of Dover's Powder. Yet I never heard or read of a physician who taught or believed that a dry skin and a free perspiration, such as flannel is known to occasion, ever did harm. "In Egypt, during the second part of summer, every one sweats profusely several times a day, and at that season the inhabitants always enjoy the most perfect health." [Glass. Comment de Feb.—Comment. x. de Sudorum Evocatione Prosper Alpinus de Med. Ægyptiorum. lib. 1. cap. xviii.] "Every man who has worn flannel any length of time knows that it neither heats him more than linen, nor subjects him to a more copious perspiration after exercise. I speak from experience, and it is proved by analogy and demonstration. If indeed flannel made us sweat, it might then do harm; but by only making us perspire it is one of the most effectual means of doing us good. [Exposition of the Principles of Anatomy and Physiology, &c. vol. 2. Note 355, by Dr. Vaughan.] "Such absurd notions as these are generally propagated by the rheumatic, the gouty, and the infirm, who are disposed to sweat in consequence of their disease, but who know not how to distinguish be-

tween the effects of their disease and those of their flannel. "Flannel is also said to excite an itching; but this objection may be made to linen: for it is evident neither fine flannel nor fine linen causes it. Nay even coarse linen and coarse flannel only cause it for a time. It is natural enough for persons to rub and scratch themselves who feel any itching; and that the skin should of course be inflamed, it is easy to suppose. But they who are prejudiced against flannel say, that flannel alone may cause an eruption. Now if it ever did this, the objection would be a very serious one. But I deny that it ever can. There still remains another objection to be mentioned. It is that flannel disposes persons to the φθειριασις of the Greeks, the *morbus pedicularis*, or *pediculatio* of the Latins. This objection, however, can only be seriously made by those who wish one flannel waistcoat to serve for many months. I do not think it worth while to remove such an objection as this: but if the reader will follow my example, and change his flannel waitcoat as often as he changes his shirt, I am certain he will find flannel far more sweet and comfortable than linen." [Dr. Vaughan's Essay on modern Clothing, 1792, p. 99—107.]

"Wool, on account of its rough surface, is more calculated to absorb infectious morbid matter than a more smooth substance; but we have nothing to apprehend from flannel upon the skin, and under the usual dress. I am rather of opinion, that it is a better preventative against contagion than any other; because, while it encourages perspiration, it at the same time removes the inhaled poisonous particles, particularly if, in cases of danger, perspiration be increased by other suitable means. Hence people

wearing flannel upon their skin, never suffer from cold. I have been informed, that the manufacturers in the different founderies of Birmingham, as well as the iron-works of Colebrook-dale and Kettley, in the most intense heat, wear no other but flannel shirts; and that without these it would be impossible to prevent continual colds, and the most fatal diseases. These advantages strongly recommend the use of flannel to every one anxious to preserve his health, but particularly to those who are exposed to all kinds of weather, as husbandmen, fishermen, mariners, soldiers, and travellers. Those who complain of cold legs and feet, are never comfortable nor healthy: if they could be prevailed on to wear worsted stockings and flannel drawers, they would acquire a quicker circulation of the blood in the lower extremities, and prevent many troubles and indispositions, from which, without this precaution, they cannot escape. By continuing the use of flannel sufficiently long, and changing it frequently, the most obstinate gouty and rheumatic complaints have often been removed, and many other imminent dangers averted. Children afflicted with rickets, cannot be better relieved than by a proper diet, and flannel shirts, which may be daily fumigated with amber, petroleum, or other fragrant substances; a process which has been frequently productive of the most beneficial effects." [Dr. Willich's Lectures on Diet and Regimen, p. 265, 266, edit. 1799.]

Objections to the foregoing Doctrine.

If an excess of perspiration be induced by warm or stimulant clothing, as by wearing flannel in contact with the skin in the summer months, a perpetual

febricula is excited, both by preventing the access of cool air to the skin, and by perpetually goading it by the numerous and hard points of the ends of the wool; which when applied to the tender skins of young children, frequently produce the red gum, as it is called; and in grown people, either an erysipelas, or a miliary eruption, attended with fever.

Shirts made of cotton or calico stimulate the skin too much by the points of the fibres, tho' less than flannel; whence cotton handkerchiefs make the nose sore by frequent use. The fibres of cotton are, I suppose, ten times shorter than those of flax, and the number of points in consequence twenty times the number; and tho' the manufacturers singe their calicoes upon a red-hot iron cylinder, yet I have more than once seen an erysipelas induced or increased by the stimulus of calico, as well as of flannel.

The increase of perspiration by heat either of clothes, or of fire, contributes much to emaciate the body; as is well known to jockies, who, when they are a stone or two too heavy for riding, find the quickest way to lessen their weight is by sweating themselves between blankets in a warm room; but this likewise is a practice by no means to be recommended, as it weakens the system by the excess of so general a stimulus, brings on a premature old age, and shortens the span of life; as may be further deduced from the quick maturity, and shortness of the lives, of the inhabitants of Hindostan and other tropical climates.

M. Buffon made a curious experiment to shew this circumstance. He took a numerous brood of the butterflies of silk-worms, some hundreds of which left their eggs on the same day and hour; these he divided into two parcels; and placing one parcel in the

south window, and the other in the north window of his house, he observed, that those in the colder situation lived many days longer than those in the warmer one. From these observations it appears that the wearing of flannel clothing next the skin, which is now so much in fashion, however useful it may be in the winter to those who have cold extremities, bad digestions, or habitual coughs, must greatly debilitate them if worn in the warm months, producing fevers, eruptions, and premature old age. [Darwin's Zoonomia, v. 2. p. 23.] The celebrated Professor Hufeland, lays down the following conditions and limitations, in what relates to the use of flannel. "On the whole," says he, "I am of opinion that it would not be adviseable, at least to children and young persons, universally to adopt a woollen texture for the covering of the skin. It is, however a salutary dress to those who, in all probability, have commenced the second half of their life; to all cold or phlegmatic temperaments; to all who lead a sedentary life; to individuals subjected to catarrhs, or frequent colds, gout, diarrhœa, and partial congestions of the blood; to all nervous patients and convalescents from severe chronical disorders; to persons who are too susceptible of the impressions of the atmosphere; and, lastly, in such climates and pursuits of life as are exposed to frequent and sudden changes of air. It is, on the contrary, hurtful to all those, without exception, who are already subjected to violent perspiration, or troubled with cutaneous erruptions, and who cannot afford to change their under-dress as often as is consistent with cleanliness." He also says, in his "Art of prolonging Life." "Warm coverings upon the bare skin are to be recom-

mended only during intense cold, or for weakly people subjected to the rheumatism. In infancy and youth, and for those whose bodies are sound, it is far preferable to wear, next the skin, either linen or cotton, with a vest of the same in summer, and in winter one of woollen." [English translation, vol. 2. p. 241.]

THE DRESS OF CHILDREN.

The Children of the Poor and Rich compared.

The dress of our children is void of order and uniformity. It is various and chequered like the whims of their parents. This is very prejudicial: it bewilders them; scatters seeds of confusion in their brain, which spread through life, and give it the cast of a tragi-comic farce. The children of the rich are clothed sumptuously, and thereby rendered proud and senseless; opinion stifles truth, dress becomes the standard of merit, and the poor man is consequently despised. The children of the poor are huddled up in rags, hardly sufficient to cover their nakedness; the consequence is, they are debased and abandoned to the contempt of themselves and of others. But tho' the children of the poor are clothed with rags, these rags are expensive from their multiplicity and artificial construction; and this increase of expense is unfavourable to marriage and population. [De la Monarchie Prussiene sous Frederic le Grand, par M. Mirabeau, t. 1. p. 167. 4to.]

The cast unclean rags, worn by most of the children of the lower classes of the people, which contain the infectious seeds of many distempers, are the cause of

great ill health and mortality among them; they perpetuate and disseminate epidemic diseases. And while the children of the poor are huddled in rags, the extirpation of the small-pox (and why not the measles, scarlet-fever, hooping-cough, itch, and all other infectious diseases?) so much to be desired, will be impossible.

Close Garments attended with bad Effects.

Our clothes are fetters to the body, the invention of gothic, barbarous ages. In infancy, when the body ought to be freely formed by unconstrained easy movement and play, when man ought to gather strength, flexibility, and firmness, when he ought to be made invulnerable like Achilles, when freedom and gladness ought to be woven into his existence, his clothes impede every natural easy motion. By these fetters children are robbed of their impresciptible rights to free and unconstrained activity of body, sport, and play; they grow up into beings feeble, sluggish, and awkward in body; little, stupid, unfeeling, and servile in mind. Real activity and industry are to be expected then only, when the human body from its earliest infancy shall have been free and unshackled. Rousseau says, "The limbs of a growing body should have plenty of room in its clothes; there should be nothing to restrain their motions or growth, nothing too tight, no ligatures about them. The dress of the French, confined and unwholesome even for men, is particularly prejudicial to children. The blood and juices, retarded in their circulation, stagnate and grow foul; the disorders arising from this, increased by an inactive and sedentary life, bring on the scurvy, a distemper

spreading more and more amongst us, and hardly known among the ancients, whom their dress and manner of living preserved from it. The tight Hussar dress, which some give to their boys, far from remedying, augments the inconvenience, for while it prevents a few ligatures, it compresses the whole body. The best way is to let children go as long as possible in loose frocks, and afterwards to let their clothes be made very wide, and not to pique yourselves on displaying their shape, which will only serve to spoil it. Their defects both of body and mind, arise almost all from the same cause; we are desirous of making men of them before their time.

With respect to the colour of their clothes, children are generally fond of the gay and lively, they suit them better also, and I see no reason why we should not in this respect consult their natural inclinations; but from the moment they prefer one stuff to another because it is rich and costly, their hearts are infected by luxury, and the caprices of opinion. This kind of taste assuredly they have not acquired of themselves. It is not easy to say what an influence the choice of clothes, and the motives for that choice, have on education. We not only see fond mothers ridiculously promising their children fine clothes as a recompense of their good behaviour, but often hear foolish preceptors threatening their pupils with coarser and plainer clothes as a punishment for their faults. "If you do n't mind your book better, if you do n't keep your clothes cleaner, you shall go dressed like a ploughboy." You may as well tell them merit consists in dress; without dress you are nothing. Is it to be wondered at, that youth profit by such wise lessons, that they hold nothing in esteem but dress, and

judge of merit only by external appearances? until the child has been subjected to our own idle notions and prejudices, his chief desire is to be easy and at liberty. The most simple, the most convenient dress is always the most prized." [Emilius, v. i. p. 224—226. edit. Lond. 1783.] "Children in general are too warmly clothed, particularly in their earliest infancy. It is much better to inure them to cold than to heat. The former will never hurt them, if they be exposed to it from an early period; but the loose and porous texture of their skin, leaving too great an opening for perspiration, subjects them to an inevitable waste of strength and spirits, from extreme heat. Hence it is that more die in August than in any other month of the year. Besides it is evident, on a comparison between the inhabitants of northern and those of southern climates, that mankind grow more robust by supporting excessive cold, than they do by bearing excessive heat. However, as the child grows up, and his fibres gather strength, you should inure him step by step to bear the rays of the sun; provided you advance gradually you may inure him, without risk, to the scorching heat of the torrid zone." [Rousseau's Emilius, v. 1. p. 228.]

On the Causes and Consequences of a too early Secretion and Emission of Semen.

During the first fifteen or sixteen years of life, the testicles ought to receive only so much blood as is necessary to keep open the veins and channels for the future secretion of seed, that the want of blood and warmth in the testicles may prevent the secretion of any seed during childhood. A boy is hardly three years old but he must be a man, he must wear

breeches. In his frock the boy was easy, and free to jump and gambol at his pleasure; in his breeches he is, 1. Pent up and shackled, and by way of compensation his mind is stuffed with opinion and folly. He bears the burden of his breeches without murmur, because he is taught to believe his breeches fine, honourable, and manly. 2. During the first and second year the boy can neither button nor unbutton his breeches, and he is continually in a sad condition. 3. To make water he must pull and strain his little pipe to get clear of his breeches; for a year and more he is unable to perform this operation himself; children, maids, and valets, lend their assistance in pulling and playing with his private parts. By this pulling, handling, and playing, the boy (and the girl too who frequently assists, and to whom the innocent boy often tries to return the friendly office), acquire an intimate acquaintance with the genitals. And this is one source of that hurtful practice which Tissot has proved to be so injurious to the human race.

"Nursery-maids, domestics, and others ought to be watched with the utmost care, that they may not foster the first germ of dissipation. I have met with some instances, where children became onanists merely through the nursery-maids, who, when they cried and would not sleep, knew no other method of soothing them than to handle and sport with their privities. The sleeping together of two ought never to be suffered." [Hufeland's Art of prolonging Life, v. 2. p. 161. transl. 1797.] From the third year of his life, sometimes earlier, the boy wears breeches, which in general are made of wool. Every avenue of the beneficent air to the testicles is shut up, they are not cooled, not braced, not quieted. On

the contrary, the breeches generate a humid warmth, which is greatest about the private parts, where the shirt convolves, and where all the heat and acrid vapours of the upper and lower parts of the body are concentrated. The heat and vapour about the private parts certainly exceed that of the abdomen and thighs by several degrees. The great warmth and humid acrid vapours about the private parts, not unlike a warm, humid, irritating vapour-bath, operating for the long period of eight or ten years, relax and debilitate the solid parts of the testicles, draw the blood and juices (perhaps the nervous fluid) into them, and the relaxed, mollified, dilated, and full-blooded testicles of a well-nourished full-blooded body, instead of being cool and unconstrained, free from irritation and pressure, with little blood in them, are thus heated, pressed, irritated, brooding, and distilling in a warm, humid, acrid vapour-bath, and continual hot-house, for the long period of eight or ten years, or to the twelfth year of a boy's life, not less than twelve or fifteen hours every day. Of necessity then there must be a secretion of seed. The breeches therefore are the principal and most powerful cause of the early secretion of seed in the tenth or twelfth, instead of the fifteenth or sixteenth year. And the consequence of this precocity is, that children pollute themselves, that mankind are destitute of vigour and virtue, that man does not stand in his true relation to himself, to the female sex, and to his species; he withers "like the vine, which, having been forced to bear fruit in the spring, languishes and dies before the autumn." That the powers of the male sex in the present age of degeneracy are not equal to the desires of the female sex is incontestibly

true; nay there is disproportion in the degenerated structure of the genital parts. The venerable Benjamin Rush, in Philadelphia, says of the Indian women of North America, "from the first appearance of the menstrual discharge to the time when it ceases, there is hardly a period in which they are not either pregnant or suckling." From the rock of Elliot to that country where Maupertuis measured the earth, breeches are the general fashion, excepting only the highlands of Scotland. Here from their infancy, instead of breeches, the males wear a sort of petticoat (probably derived from the tunica of the Romans), which ends above the knee. Their thighs and genitals, like those of the Romans, are bare, and exposed to the air. It is evident that breeches by the warmth, vapour, pressure, and irritation, which they occasion, must of necessity draw the blood into the testicles prematurely, and that of necessity a premature distillation and secretion of seed must be the consequence. In former ages breeches were cooler, wider, and more easy than at present, particularly during childhood; children ran half naked and for a longer time in frocks. [Pomponius Mela. l. iii. c. 3.] In former ages children were kept much colder, hardier, and rawer, much more like savages: brain and nerves were at rest, they grew up in simplicity, modesty, and order, and formed a race much healthier and better than the present. The supposition that our ancestors were perfectly healthy and vigorous, and that the present much decayed generation proceeds from a healthy unimpaired stock, and owes its imbecility merely to its own misconduct, is erroneous. The root of the evil lies much deeper, and it may be traced to a long series of generations. The

baneful influence of breeches has worked upon the constitutions of our ancestors, notwithstanding all the counteracting severity of their mode of living.

Causes of Ruptures.

Dr. Faust estimates that France has 43,000 parishes, which in general consist of two or three villages.

That 3 ruptured males to each parish is	129000
400 large towns at 20 each is - -	8000
1600 small towns at 10 each is - -	16000
	153000

We shall be enabled to ascertain by a comparison of the number of inhabitants, the proportionate number of ruptured males in England. Thus France, on the authority of Guthrie, contains twenty-five millions of inhabitants, and England seven millions. In this proportion there are 42840 ruptured males in England! Women are likewise subject to ruptures, but the number of ruptures among women is to that among men as one to twenty-five. A very great and striking difference! The reason is, that the groin and abdomen of the woman are kept much cooler than those of the man, with whom the heat and vapour, created by the breeches from his earliest infancy, soften, debilitate, relax, and dilate the muscles and aponevroses, by which the abdominal rings are formed. The supposition of the harder labour of the men being the cause of this striking difference is in a great measure erroneous; for many women undergo hard labour as well as the men; through the greatest part of France they carry astonishing weights, even upon their heads, by which the abdominal rings might easily suffer; probably one half of all the ruptures are occasioned

by sudden violent concussions, such as coughing, sneezing, falling, and the like, to which women are as liable as men, besides the dangers of child-bearing and high-heels, which are peculiar to the sex.

Ruptures then, with all the miseries they entail on the human race, are in a great measure also to be attributed to the wearing of breeches *in the years of infancy*. If we be perfectly moderate and indulgent, and place only two thirds of the whole number to the score of breeches (in which case the proportion of female to male ruptures still remains as one to eight and a third), there will be in England no less than 31980 ruptured miserable human beings, in one generation, 6400 of whom die in the greatest torments, victims to the practice of wearing breeches in their infancy. The idea of steering a middle course, by giving thinner and wider breeches to children, and those some years later than usual, would be unfortunate. Even wide breeches of linen or cotton create warmth, pressure, and irritation, and exclude the all-powerful influence of the cooling, soothing, invigorating air. By covering and buttoning up the private parts of children they are considered in good custody, the main point of education is neglected, and the child ruins itself. Away then with the breeches of children! Some time must elapse, before the weakness of the abdominal rings, brought on by breeches, transmitted by propagation (probably to the female sex also); and increased by both, through a series of generations, can subside, and before the abdominal rings can recover their natural tone and vigour. It must be made a point of manners that children, particularly boys, are not to touch their private parts. The general introduction

of this custom will be easy. "I put a boy," says Dr. Faust, "of three years, who had already worn breeches for some time, into a frock. At first he touched his private parts frequently; I forbade it seriously and watched him. The open air, cooled, soothed, and strengthed his private parts, and he overcame his bad habit entirely.

Caps,

or something like them, are fixed upon the heads of our children soon after birth, and made to bind the external ear closer to the skull than it was ever naturally intended. Mothers and nurses think nothing more unbecoming an infant than prominent ears; and ladies are in general so averse to them that they hide them as a deformity. Hearing is lessened by flattening the ears. Nature seems to have made the human ears moveable, like those of dogs, horses, &c. otherwise why are they furnished with muscles. For tho' the number of the muscles of the external ear be different in different subjects; yet there never was a subject in whom there was not some, as well belonging to the whole external ear as to its several parts.

Miscellaneous Hints on the Dress of Children.

The dress of children ought to be wholesome, cheap, free, easy, open, cool, and simple. The wise and excellent abbot Barthelemy says of the Lacedæmonians, "Their dress consists in a tunic, or kind or short shift, and a robe which descends to the heels. The girls who are obliged to employ every moment of their time in wrestling, running, leaping, and other laborious exercises, usually only wear a light garment without sleeves, which is fastened over the shoulders

with clasps, and which a girdle prevents from falling below the knee. The lower part is open at each side, so that half the body is naked. Lycurgus could not subject the girls to the same exercises as the men without removing every impediment to their motions. He had, no doubt, observed that man did not cover himself till after he was become corrupted, and that his garments multiplied in proportion to his vices; that the charms, which seduce him, frequently lose their attraction by being constantly exposed to his view, and that, in fine, the eyes only defile those minds which are already defiled. Guided by these reflections he undertook by his laws to establish such a harmony of virtues between the two sexes, that the temerity of the one should be repressed, and the weakness of the other supported. Thus not contented to decree the punishment of death against him who should dishonour a maiden, he accustomed the youth of Sparta to blush only at vice. Modesty deprived of a part of its veil was respected by both sexes, and the women of Lacedemon were distinguished for the purity of their manners. I may add that Lycurgus has found partisans among the phisophers. Plato in his republic would have the women of every age follow their exercises in the Gymnasium, with no other garments than their virtues." The Romans went with their arms naked, and they held it indecent to cover them with sleeves. [Aulus Gellius, l. vii. v. 12.] The old Germans also went with their arms naked. The Lacedemonians, as mentioned by the Abbot Barthelemy, observed the same rule, and Ellis says of the Indian women of Hudson's Bay, " the sleeves of their upper habit are frequently separated from the body, and taken on

and off at pleasure, being only tied with strings at their shoulders; so that their arm-pits, even in the depth of winter, are exposed to the cold, which they reckon contributes to their health." [Voyage to Hudson's Bay, p. 186.]

Agreeably to the reasoning pursued in the former pages, the following peculiar, uniform, equal dress for children of both sexes, is proposed.

1. The head and neck uncovered, the breast open, the hair cut short all round, without curls and powder. 2. A wide shirt not extending beyond the knees, open at the breast down to the stomach, with a collar falling backwards, the sleeves of equal width, ending above the elbows, neither tied nor buttoned, but open, so as to give the air free access to the upper part of the arm, arm-pit, and breast.

3. In summer a wide frock to be worn over the shirt. This properly constitutes the dress, and has the following immutable form. About the neck and breast it is cut out wide, with a slit down to the stomach, buttoned with three buttons. It has no slit nor opening at the sides. A great deal may be said against pockets for children in general, but if pockets are to be allowed they must be on the outside, by no means on the inside of the frock. The sleeves end above the elbow, they must be wide and open, for the same reasons which have been given in the second article. The arm, the chief instrument of man, must be kept quite free and unconstrained, perfectly accessible to the air, from which it is to derive health and vigour. The frock must not exceed three inches in length below the knee. Behind it must be cut open, so as not to create the least obstruction in walking or jumping. The extremities of the frock may be bound,

and doubled in, so as to admit of being let out, according to the growth of the child. The material may be linen, cotton, or silk. Undoubtedly it would be best, if the free open garments of children did not end below but above the knee: the tunica of the Romans ended above the knee, and the Romans were good judges of propriety and decency.

4. In winter an additional frock of the same form made of wool or cotton, may be worn under the other. 5. The stockings must end below, not above the knee, that the knee may be free and naked, invigorated by the influence of the air. In summer it is best for children to go without either shoes or stockings. Clothes should not be dried in stoves or ovens, where the steam cannot ascend as in a chimney, because they become tainted with corrupt air. "The practice of putting many clothes upon children, indulging them in sitting over the fire, sleeping in warm rooms, and preserving them from being exposed to the various inclemencies of the weather, relaxes their bodies and enervates their minds. If children, along with such an effeminate education, are pampered with animal food, rich sauces, and such other diet as overcharges their digestive powers, they become sickly as well as weak. All that class of diseases which arise from the catching of cold, or a sudden check given to perspiration, is found only among the civilized part of mankind. An old Roman or an Indian in the pursuits of war or hunting, would plunge into a river whilst in a profuse sweat, without fear or danger. A similar hardy education would make us all equally proof against the bad effects of such accidents. The greater care we take to prevent catching cold by the various con-

trivances of modern luxury, the more we become subjected to it. We can guard against cold only by rendering ourselves superior to its influence. There is a striking proof of this in the vigorous constitutions of children braced by the daily use of the cold bath; and still a stronger proof in those children who go thinly clad and without stockings or shoes in all seasons and weathers. Nature never made any country too cold for its own inhabitants. In cold climates she has made exercise and even fatigue habitual to them, not only from the necessity of their situation, but from choice, their natural diversions being all of the athletic and violent kind. But the softness and effeminacy of modern manners has both deprived us of our natural defence against the diseases most incident to our own climate, and subjected us to all the inconveniences of a warm one, particularly to that debility and morbid sensibility of the nervous system, which lays the foundation of most of our diseases, and deprives us, at the same time of the spirit and resolution to support them. These few observations are selected from a great number that might be mentioned, to prove that many of the calamities complained of as peculiarly affecting the human species, are not necessary consequences of our constitution, but are entirely the result of our own caprice and folly in paying greater regard to vague and shallow reasonings, than to the analogous constitutions of other animals. If we would inquire into the cause of our weak and sickly habits, we must go back to the state of infancy. The foundation of the evil is laid there. There is the the highest probability that if we led natural lives, we should retain to the last the full exercise of all

our senses. There is no reason to doubt but it is in the power of art to protract life even beyond the period which nature has assigned to it." Dr. Gregory's Comparative View, discourse i.] Numerous instances might be adduced of the power of habit in forming the health and vigour of the human constitution. But they would swell the size of this tract unnecessarily. Besides, if the reasoning already produced proves ineffectual in reclaiming men from ridiculous and silly customs, no example whatever can influence. We beg leave, however, for the sake of those who are capable of admitting the truths of fact and experience, to give a recent instance, in the person of JOHN HOWARD, as related by Mr. Pratt, who, after a life devoted to the assistance of the most miserable of the human kind, whom he sought in recesses where they are seldom looked for, died at Cherson, in Russia, Jan. 20, 1790, aged about 63, the victim of a disease, the ravages of which he was exerting every effort to restrain.

"He was singular in many habits of life: he preferred damp sheets, linen, and clothes, to dry ones; and both rising and going to bed, swathed himself with coarse towels dipped in the coldest water he could get; in that state he remained half an hour, and then threw them off, freshened and invigorated, as he said, beyond measure. He never put on a great coat in the coldest countries; nor had been a minute under or over the time of an appointment, so far as it depended on himself, for six and twenty years. He never continued at a place, or with a person, a single day beyond the period prefixed for going; and he had not for the last sixteen years of his existence ate any fish, flesh or fowl; nor sat down to

his simple fare of tea, milk, and rusks, all that time. His journies were continued from prison to prison, from one group of wretched beings to another, night and day; and where he could not go with a carriage he would ride, and where that was hazardous he would walk. Such a thing as an obstruction was out of the question. Some days after his first return from an attempt to mitigate the fury of the plague in Constantinople, he favoured me with a morning visit in London. It rained torrents, and the wet dripped from every part of his dress like water from a sheep just landed from its washing. He would not even have attended to his situation, having sat himself down with the utmost composure, and began conversation, had I not made an offer of dry clothes, &c. "Yes," said he, smiling, "I had my fears, as I knocked at your door, that we should go over the old business of apprehensions about a little rain water, which tho' it does not run off my back, as it does from that of a duck, goose, or any other aquatic bird, does me as little injury; and after a long drought is scarcely less refreshing. The coat I have now on has been as often wetted through as any duck's in the world, and, indeed, gets no other sort of cleaning. I do assure you, a good soaking shower is the best brush for broad cloth in the universe. You, like the rest of my friends, throw away your pity on my supposed hardships with just as much reason as you commiserate the common beggars, who, being familiar with storms and hurricanes, necessity and nakedness, are a thousand times, so forcible is habit, less to be compassionated than the sons and daughters of ease and luxury, who, accustomed to all the enfeebling refinements of feathers by night,

and fires by day, are taught to feel like the puny creature stigmatized by Pope, who shivered at a breeze. All this is the work of art, my good friend; nature is more independent of external circumstances. Nature is intrepid, hardy, and adventurous; but it is a practice to spoil her with indulgencies, from the moment we come into the world. A soft dress, a soft cradle, begin our education in luxuries, and we do not grow more manly the more we are gratified: on the contrary, our feet must be wrapped in wool or silk, we must tread upon carpets, breathe, as it were, in fire,—avoid a tempest, which sweetens the air, as we would a blast that putrifies it, and guarding every crevice from an unwholesome breeze, when it is the most elastic and bracing, lie down upon a bed of feathers, that relax the system more than a night's lodging upon flint stones. I am a living instance of the truths I insist on. A more "puny whipster" than myself, in the days of my youth, was never seen. I could not walk out in an evening without wrapping up: if I got wet in the feet a cold succeeded; I could not put on my shirt without its being aired; I was, politely enfeebled enough to have delicate nerves, and was occasionally troubled with a very genteel hectic. To be serious, I am convinced that what emasculates the body debilitates the mind, and renders both unfit for those exertions which are of such use to us as social beings. I, therefore, entered on a reform of my constitution, and have succeeeded in such a degree, that I have neither had a cough, cold, the vapours, nor any more alarming disorder, since I surmounted the seasoning. Prior to this I used to be a miserable dependent on wind and weather; a little too much of either would postpone,

and frequently prevent, not only my amusements, but my duties; and every one knows that a pleasure or a duty deferred is often destroyed. Young has justly called procrastination the thief of time. And if pressed by my affections, or by the necessity of affairs, I did venture forth in despite of the elements, the consequences were equally absurd and incommodious, not seldom afflictive. I was muffled up even to my nostrils; a crack in the glass of my chaise was sufficient to distress me; a sudden slope of the wheels to the right or left set me a trembling. Mulled wines, spirituous cordials, and great fires were to comfort me, and keep out the cold, as it is called, at every stage; and if I felt the least damp in my feet or other parts of my body, dry stockings, linen, &c. were to be instantly put on; the perils of the day were to be baffled by something taken hot going to bed, and before I pursued my journey the next morning, a dram was to be swallowed to fortify the stomach. In a word, I lived, moved, and had my being so much by rule, that the slightest deviation was a disease. Every man must, in these cases, be his own physician. He must prescribe for, and practise on, himself. I did this by a very simple, but, as you will think, very severe regimen; namely, by denying myself almost every thing in which I had long indulged. But as it is always much harder to get rid of a bad habit than to contract it, I entered on my reform gradually; that is to say, I began to diminish my usual indulgences by degrees. I found that a heavy meal, or a hearty one, as it is termed, and a cheerful glass, that is to say, one more than does one good, made me incapable, or at best, disinclined to any useful exertion for some hours after dinner; and

if the diluting powers of tea assisted the work of a disturbed digestion, so far as to restore my faculties, a luxurious supper comes so close upon it that I was fit for nothing but dissipation, till I went to a luxurious bed, where I finished the enervating practices, by sleeping eight, ten, and sometimes a dozen hours on the stretch. You will not wonder that I rose the next morning with the solids relaxed, the nerves unstrung, the juices thickened, and the constitution weakened. To remedy all this, I ate a little less at every meal, and reduced my drink in proportion. It is really wonderful to consider how imperceptibly a single morsel of animal food, and a tea-spoonful of liquor deducted from the usual quantity daily, will restore the mental functions without any injury to the corporeal: nay, with increase of vigour to both. I brought myself, in the first instance, from dining on many dishes, to dining on a few, and then to being satisfied with one; in like manner, instead of drinking a variety of wines, I made my election of a single sort and adhered to it alone. My next business was to eat sparingly of that adopted dish and bottle. My ease, vivacity, and spirits augmented. My clothing, &c. underwent a similar reform; the effect of all which is, and has been for many years, that I am neither affected by seeing my carriage dragged up a mountain, nor driven down a valley. If an accident happen I am prepared for it, I mean so far as respects unnecessary terrors; and I am proof against all changes in the atmosphere, wet clothes, wet feet, night air, damp beds, damp houses, transitions from heat to cold, and the long train of hypochondriac affections. Believe me, we are too apt to invert the remedies which we ought to prescribe to

ourselves—thus, we are for ever giving hot things when we should administer cold. I am satisfied that if we were to trust more to nature, and suffer her to apply her own remedies to cure her own diseases, the formidable catalogue of human maladies would be reduced to a third of their present number. Dr. Sydenham, for example, I think, reckons sixty different kinds of fevers; of these I cannot suppose less than fifty are either brought about, or rendered worse by misapplication of improper remedies, or by our own violation of the laws of nature. And the same may be said of other disorders." [Pratt's "Gleanings in Wales," &c., vol. i.]

The reader it referred to a very proper and necessary appendage to this pamphlet in Madame de Sillery's "Treatise on Gymnastics," and extracts from authors on the subject of education, sleeping, &c. in No. 19 of this publication.

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